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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,577	09/02/2004	Tung M. Fong	20944YP	1561

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EXAMINER	
CHANDRA, GYAN	
ART UNIT	PAPER NUMBER
1646	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,577	FONG ET AL.	
	Examiner	Art Unit	
	Gyan Chandra	1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 September 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/2/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Re: Fong et al.
Date of Priority: 03/05/2002 (60/361806)

DETAILED ACTION

Status of Application, Amendments and/or Claims

Claims 1-12 are pending and under examination.

Information Disclosure Statement

The Information Disclosure Statement of 09/02/2004 has been considered.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figure 1A is labeled as the top panel but there is no label for the bottom panel of Figure 1. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention (page 6, Figure 9). Figure 9 describes the effect of treatment with AM251 on body weight. Applicant is required to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, and 9-12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuki et al (IDS, J. Clinical Endocrin. Metab 86: 1921-1924, 2001) in view of Shimokawa et al.(IDS, Proc. Natl. Acad. Sci. 99: 66-71, 2002).

Claims 1-5, and 9-12 are broadly drawn to a method of determining the efficacy of a test compound given to a subject for the treatment of obesity, the method comprising (a) assaying a plasma sample from the subject to determine a level of agouti related protein (AGRP) at first time point; (b) administering the test compound to the subject; and (c) thereafter assaying a plasma sample from the subject to determine the level of AGRP at second time point, wherein the test compound is an appetite suppressant, wherein a decreased level of AGRP at the second time point relative to the first time point is indicative of the efficacy of the test compound in treating obesity (claim 1), wherein a decreased level of AGRP at the second time point relative to the first time point is indicative of effect of a therapeutic agent (claim 11) or wherein a

decreased level of AGRP at the second time point relative to the first time point is indicative of an efficacy of the appetite suppressant in treating obesity at the dosage administered (claim 12) , wherein in the subject is a human (claim 2), wherein the subject is a rodent (claim 3), wherein the subject is a rat (claim 4), wherein the level of AGRP is determined by RIA (claim 5), wherein the amount of time between the first time and the second time point is at least four hour, wherein the amount of time between the first time and the second time point is from about two hours to about four days.

Katsuki et al teach the hypothalamic AGRP regulates body weight via melanocortin-4 receptor. Katsuki et al teach measuring the plasma level of AGRP in obese and non-obese men to investigate the relationship between plasma levels of AGRP and various parameters of obesity (page 1921, left column) (claim 2). Katsuki et al teach that the plasma levels of AGRP are significantly increased in obese men and that there is significant correlation between increased level of AGRP and various parameters of obesity. They teach that the increased level of AGRP may be involved in the pathogenesis of obesity. Katsuki et al teach that AGRP is also present in the systemic circulation of rats (which is a rodent) (claims 3-4). Katsuki et al teach measuring AGRP using radioimmunoassay (RIA) (page 1921, Study protocol and methods).

Katsuki et al do not teach administering a compound in a subject wherein the compound is an appetite suppressant, wherein the compound does not stimulate the release of serotonin.

Shimokawa et al. teach that the administration of a compound, C75 in mice reduce food intake and body weight (abstract, page 67, right column). Shimokawa et al teach administering C75 at 30 mg/kg body weight and measured food intake at 1 hour intervals for 6 hour and again at 24 hour after injection. They teach measuring AgRP expression level in mice treated with the C75 compound (page 68, left column). They teach that there is a significant increase in AgRP expression at 4-hour and 6-hour points of C75 treatment (page 69 last paragraph through 1st paragraph of page 70, and Fig. 5a) (claims 9-10). Shimokawa et al teach that C75 is a fatty acid synthase inhibitor and could work through leptin signaling (page 71) and therefore, C75 may not work by stimulating the release of serotonin, unless evidence to contrary.

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention was made to measure the plasma levels of AGRP in obese subjects at various time points (1, 2, 3, 4, 5, 6 or 24 hour) after administering the compound C75 because C75 inhibits food intake. One of ordinary skill of the art would have been motivated to measure the plasma level of AGRP before treating with compounds and then after treatment with the compounds to establish a relationship and to determine the effect of the compound as taught by Shimokawa et al. One would have a reasonable expectation of success in measuring the plasma level of AGRP and determining the efficacy and effective dosage of the compound in obese subjects as Shimokawa et al teach that the compound is effective in inhibiting food intake.

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katsuki et al in view of Shimokawa et al. as applied to claims 1-5 and 9-12 above, and further in view of Rosen et al (US Patent No. 6,905,688).

Claims 6-8 are broadly drawn to methods of determining the level of AGRP in a plasma sample, wherein the level of AGRP is determined (i) by ELISA (claim 6), (ii) by radioligand assay (claim 7), or (iii) by liquid chromatography.

The teachings of Katsuki et al in combination of Shimokawa et al are as set forth above. Neither Katsuki et al nor Shimokawa et al teach determining the plasma level of AGRP using either ELISA, radioligand binding assay or a liquid chromatography.

Rosen et al teach various methods for determining the level of a protein. They teach using ELISA method to determine a cytokine level (col. 99, line 60+, col. 190, line 24+). They teach using radio ligand binding assay, where a ligand is labeled with an isotope, to determine the level of a specific polypeptide (col. 258, ligand binding assay). Rosen et al teach purifying and determining the level of a protein using liquid chromatography (col. 87, lines 35+).

Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time of invention was made to determine the level of AGRP by using any of the methods such as liquid chromatography, ELISA or radioligand binding assay as taught by Rosen et al. Additionally, one would have been motivated to do so because Rosen et al teach use of methods such as ELISA, liquid chromatography or radioligand binding assay can determine the level of a specific protein in a sample. . Further, one would have a reasonable expectation in determining the level of AGRP in a plasma

sample using ELISA, liquid chromatography or radioligand binding assay as these methods are used routinely in the art and as taught by Rosen et al.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gyan Chandra whose telephone number is (571) 272-2922. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Nickol can be reached on (571) 272-0835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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